

demic institutions conduct nearly half of the nation's basic research, provide world-class advanced training to young researchers, and have become key partners in knowledge transfer to industry.

Rising U.S. industrial R&D has produced a steady stream of innovations, including new products, processes, and services, that have spurred economic growth, contributed to increased productivity, and raised per capita income. New forms of R&D and technology alliances connect firms with universities, nonprofit organizations, and government. The very conduct of R&D has changed in response to market pressures and the capabilities created by the IT revolution.

Governments in many countries have responded to these developments. Convinced that strength in S&T translates into concrete economic advantage, they have invested in education, R&D, and technical development. Private firms, responding to market pressures, have also increased their R&D activities. These moves have resulted in the creation of new centers of scientific and technical activity in many parts of the world. As industry, governments, and universities have started exploiting the new opportunities created by these developments, R&D and knowledge transfers have increasingly acquired global dimensions. U.S. research scientists and U.S. firms have been active participants in these international R&D activities.

The net effect of these trends for economic development and open international knowledge flows is undoubtedly positive both for the United States and for other countries. Yet these developments also pose challenges. As new centers of technological excellence arise, firms and universities in the United States may find it increasingly difficult to recruit scientists and engineers from abroad, currently an important source of supply. Foreign students may increasingly return home after their training, and U.S. firms may find it advantageous to locate technically sophisticated functions overseas. These potential developments bear watching, because they would affect U.S. policies that support S&T and the education and training of the domestic S&E workforce.

Selected Bibliography

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